

# **RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

## **DIVISION OF FISH AND WILDLIFE**



### **BOWHUNTER SIGHTING LOG 2004 SUMMARY**



In 2001, The Division of Fish and Wildlife implemented a voluntary sighting log survey for the state's archery deer hunters. The survey is modeled on similar surveys that have been used successfully for a number of years in other states such as New York and Virginia. The objective of the sighting log survey is to collect reliable information on a variety of wildlife species to help monitor the relative abundance of these species over time.

There are rarely enough personnel and resources available to wildlife managers to conduct population monitoring of more than a few wildlife species and particularly those that do not have to be tagged by the Division of Fish and Wildlife. Harvest data is often relied upon to estimate changes in wildlife populations, yet many variables often make harvest information alone a poor index of population trends. The number of unsolicited sighting reports, nuisance complaints, and road-kills can be related to wildlife population levels and provide useful information. The sighting log will provide an additional source of information, which when combined with other available data will improve our ability to detect changes in population levels for furbearers and other wildlife species. Another use of the survey is to gain a better understanding of distribution of species for which there may be little or no information.

Bowhunters have been the focus of sighting log surveys primarily because most bowhunters hunt from a stand, allowing them an opportunity to accurately identify any animals they observe. Additionally, the length of the archery season is longer than other methods, extending the observation period over several months. Many muzzleloader and shotgun hunters also hunt from a stand and the term "bowhunter sighting log" should not deter them from participating in the survey.

Participants were asked to record the number of hours hunted and the number of sightings of selected wildlife species each time they hunted throughout the archery deer season. In addition to those species listed on the survey card, participants were asked to record other species observed such as chipmunks, hawks, owls and domestic animals such as cats or dogs. Sightings of other hunters or other people observed while hunting should also be recorded. The number of sightings recorded is converted to a sighting rate (number of sightings/100hrs). The sighting rate can be compared from year to year, from area to area, and can be a useful index of population trends for certain species.

During the 2004-2005 season hunters logged over 1700 hours of observation time during 532 individual outings, a 21% increase in observation hours from last year. The number of sighting logs returned also increased from last year. The number of observation hours used to calculate sighting rates only includes those entries that were correctly logged on the sighting report form. A number of reporting cards, representing a significant number of hours, could not be used because of incorrect or incomplete

recording of information such as failing to use separate lines for hours hunted in the morning and afternoon on the same day.

Observations were recorded in twenty-four different towns, five more than in 2003-2004. New towns included Jamestown and New Shoreham (Block Island) from which no observations were recorded in previous years. Portsmouth (Prudence and Patience Islands) led all towns with the highest number of hunts, (101), followed by Exeter (83); and Hopkinton (62). October had the highest number of observation hours (798.3) as well as the most number of hunts (248). Eighty percent of recorded hunts occurred on private land. The number of antlerless deer sighted per 100 hours of observation time decreased slightly from 38.5/100 hrs in 2003 to 37.2/100 hrs in 2004. The number of bucks sighted also decreased slightly from 7.2/100 hrs in 2003 to 6.7/100 hrs in 2004. The sighting rate for squirrels (red and gray) decreased from 46.8/100 hrs in 2003 to 33.5/100 hrs in 2004. Annual mast surveys conducted by the DEM on state management areas in the fall of 2004 indicated little or no acorn production in many areas of the state. This was a dramatic difference from the fall of 2003 when mast surveys indicated above average production for red and white oaks throughout the state.

When looking at the tables, it is important to remember that a change from the first year of the survey to the second year of the survey does not necessarily mean a change in the population. Many factors can affect the visibility of wildlife including weather, availability of food, etc. Also the low number of participants, the distribution of participants and low number of observation hours will affect the data. Over time, with an adequate and consistent number of participants and better distribution throughout the state, we may be able to detect trends in populations of some species.

The Division of Fish and Wildlife wishes to thank those hunters that participated in the bowhunter sighting log. Survey forms will be available again this year prior to the opening of the mainland archery deer season. Survey forms can be downloaded from the DEM website: [www.dem.ri.gov](http://www.dem.ri.gov) as well as various check stations and Fish and Wildlife offices. A continued effort will be made to increase the number of participants and the statewide distribution of effort and to refine the survey. The usefulness of the survey will depend on adequate participation and distribution of observers. Other potentially useful data that could be incorporated into the survey might include: weather conditions, number of bucks chasing does, doe to fawn ratios, or number of other hunters observed. Any comments or suggestions to make the survey more effective are welcomed. Survey results will be mailed to all participants who returned a survey card and provided a return address. Survey results are also available at Fish and Wildlife offices. If you know of anyone who might like to participate in the survey contact the Division of Fish and Wildlife at the Great Swamp Field Headquarters, West Kingston, RI. Telephone **401-789-0281**.

2004-2005 Rhode Island Bowhunter Sighting Log Survey

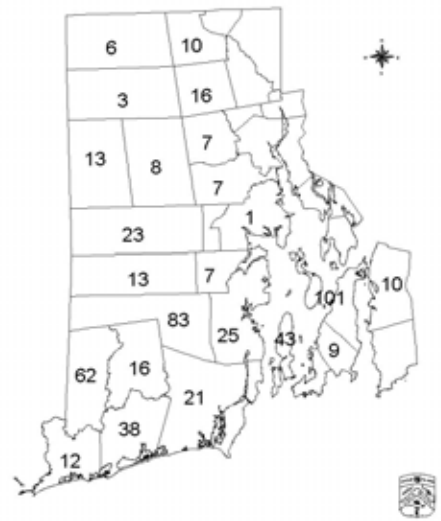


Figure 1. The number of hunts in towns where participating hunters recorded their observations during the 2004-2005 survey

Table 1. Number of hunts AM (morning) and PM (evening)

| Time of day | # of hunts | % of hunts |
|-------------|------------|------------|
| AM          | 268        | 50.4       |
| PM          | 264        | 49.6       |

Table 2. Number of recorded survey hours by month

| Month         | # of hours     |
|---------------|----------------|
| October 2004  | 798.3          |
| November 2004 | 567.25         |
| December 2004 | 216.5          |
| January 2005  | 123            |
| Total:        | <b>1705.05</b> |

Table 3. Number of hunts per month for 2004-05 sighting log

| Month         | # of hunts | % of hunts |
|---------------|------------|------------|
| October 2004  | 248        | 46.6       |
| November 2004 | 176        | 33.1       |
| December 2004 | 70         | 13.2       |
| January 2005  | 38         | 7.1        |
| Total:        | <b>532</b> |            |

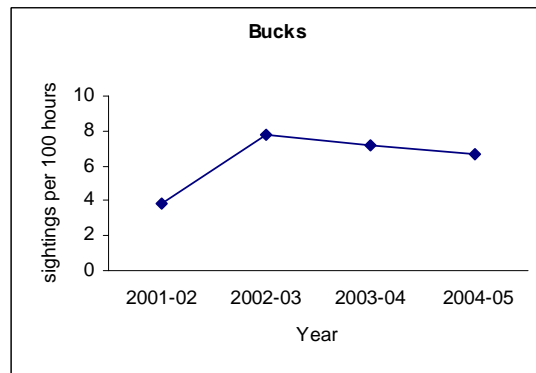
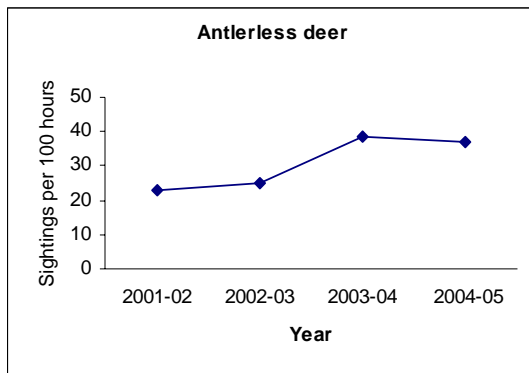


Table 4. Number of hunts per town for 2004-05 sighting log

| Town             | # of<br>hunts |
|------------------|---------------|
| Block Island     | 4             |
| Burrillville     | 6             |
| Charlestown      | 38            |
| Coventry         | 23            |
| Cranston         | 1             |
| East Greenwich   | 7             |
| Exeter           | 83            |
| Foster           | 13            |
| Glocester        | 3             |
| Hopkinton        | 62            |
| Jamestown        | 43            |
| Johnston         | 7             |
| Middletown       | 9             |
| North Kingstown  | 25            |
| North Smithfield | 10            |
| Portsmouth       | 101           |
| Richmond         | 16            |
| Scituate         | 8             |
| Smithfield       | 16            |
| South Kingstown  | 21            |
| Tiverton         | 10            |
| Warwick          | 1             |
| West Greenwich   | 13            |
| Westerly         | 12            |
| Total:           | <b>532</b>    |

Table 5. Number of animals seen per 100 hours of observation statewide

| Species           | 2004-<br>2005 | 2003-<br>2004 | 2002-<br>2003 | 2001-<br>2002 |
|-------------------|---------------|---------------|---------------|---------------|
| fisher            | 0.7           | 1.1           | 0.88          | 2.3           |
| coyote            | 0.5           | 1             | 0.76          | 1.8           |
| bobcat            | 0             | 0.1           | 0.22          | 0             |
| squirrels         | 33.5          | 46.8          | 15.6          | 41.7          |
| raccoon           | 0.7           | 0.7           | 0.11          | 0             |
| red fox           | 1.1           | 0.2           | 0.44          | 1.3           |
| gray fox          | 0.2           | 0.7           | 0.66          | 0.5           |
| turkey            | 10            | 8.1           | 16.3          | 45.1          |
| deer (bucks)      | 6.7           | 7.2           | 7.8           | 3.8           |
| deer (antlerless) | 37.2          | 38.5          | 25.2          | 22.8          |

Table 6. Number of animals seen per 100 hours of observation AM/PM statewide

| Species           | #<br>seen/100<br>hours<br>(AM) | #<br>seen/100<br>hours<br>(PM) |
|-------------------|--------------------------------|--------------------------------|
| fisher            | 0.9                            | 0.4                            |
| coyote            | 0.5                            | 0.5                            |
| bobcat            | 0                              | 0                              |
| squirrels         | 37.5                           | 28.4                           |
| raccoon           | 1.5                            | 1.2                            |
| red fox           | 0.8                            | 1.3                            |
| gray fox          | 0.2                            | 0.3                            |
| turkey            | 6.7                            | 14.4                           |
| deer (bucks)      | 6.3                            | 7.1                            |
| deer (antlerless) | 31                             | 45.2                           |

Table 7. Number of deer seen per 100 hours of observation

|                           | total hours | # seen/<br>100 hours<br>(bucks) | # seen/<br>100 hours<br>(antlerless) |
|---------------------------|-------------|---------------------------------|--------------------------------------|
| Prudence/Patience Islands | 357.5       | 12.5                            | 71.0                                 |
| Jamestown                 | 148.3       | 5.4                             | 22.9                                 |
| mainland only             | 1185.8      | 5.0                             | 29.2                                 |

Table 8. Number of recorded hunts per location 2004-05 sighting log

| Location                      | # of hunts | % of hunts |
|-------------------------------|------------|------------|
| Arcadia Management Area       | 3          | 0.56       |
| Big River Management Area     | 3          | 0.56       |
| Black Hut Management Area     | 0          | 0          |
| Buck Hill Management Area     | 0          | 0          |
| Burlingame Management Area    | 0          | 0          |
| Cocumscussuc Park             | 0          | 0          |
| Durfee Hill Management Area   | 3          | 0.56       |
| Eight Rod Farm Mgt. Area      | 1          | 0.18       |
| Great Swamp Management Area   | 18         | 3.4        |
| J.L.Curran Management Area    | 1          | 0.18       |
| Prudence Is. Management Area* | 71         | 13.3       |
| Simmons Mill Management Area  | 0          | 0          |
| Woody Hill Management Area    | 3          | 0.56       |
| private land                  | 429        | 80.6       |
| Total:                        | <b>532</b> |            |

\*includes Patience Island

Table 9. Other species recorded

| Species                  | # of sightings reported |
|--------------------------|-------------------------|
| chipmunk                 | 32                      |
| hawk(s)                  | 18                      |
| owl(s)                   | 5                       |
| Canada geese             | 54                      |
| housecat                 | 6                       |
| mink                     | 2                       |
| southern flying squirrel | 1                       |
| dogs                     | 2                       |
| pheasant                 | 1                       |
| nighthawk                | 2                       |
| woodpecker               | 2                       |
| crow                     | 2                       |

